

# CURRICULUM VITAE

FARKHANDA ANA

*Assistant Professor*  
*Department of Electronics and Communication*  
*School of Engineering and Technology*  
*BGSB University, Rajouri, J&K-185131*

**IEEE MEMBERSHIP ID:** 96450049

**ORCID ID:** 0000-0002-8158-4380

**SCOPUS ID:** 57191242885

**Web of Science/Publons Researcher ID:** AAP-5313-2020

## *Residential address*

BB3, Staff quarters, Baba Ghulam Shah Badshah University,  
Rajouri, J&K, India, 185131

## *Permanent address*

3/3, Kakaw Enclave, Rose Lane Colony, Buchpora  
Srinagar, J & K, India

E-mail: anashah@bgsbu.ac.in

**Present Position** Assistant Professor in the Department of ECE, SOET, BGSB University, Rajouri, J&K since September 2016.

## **Fields of Research Interest**

Organic Thin-Film Transistors: Modelling and Simulation  
Deep Sub-Micron MOS Device Design: Issues and Challenges

## **Educational Degrees**

- |                |                          |  |
|----------------|--------------------------|--|
| <i>Ph.D.</i>   | <b>2019</b><br>(Awarded) | Department of ECE, National Institute of Technology, Srinagar<br><b>Thesis Title:</b> Performance Investigation of bottom-contact organic thin-film transistors: Modeling and Simulation   |
| <i>M. Tech</i> | <b>2009-2011</b>         | <b>M.Tech</b> degree in <b>Communication and IT</b> , Department of Electronics and Communication, National Institute of Technology, Srinagar with C.G.P.A. of <b>8.733</b> .<br><br><b>Thesis title:</b> "Effect of Gate Workfunction Engineering on Gate Induced Drain Leakage Current: Modeling and Simulation."<br><b>Award of Gold medal-First position</b> |
| <i>B.E.</i>    | <b>2004-2008</b>         | B.E degree in Electronics and Communication, from S.S.M College of Engineering and Technology, Affiliated to Kashmir University with an aggregate percentage of <b>75.3 (Distinction)</b> , 2008.  |

<i>Higher Secondary</i>	2003	Mallinson Girl's Higher Secondary School, Srinagar, J & K Board of School Education with an aggregate percentage of <b>81.5 (Distinction), 2003.</b>
<i>Senior Secondary</i>	2001	Mallinson Girl's Higher Secondary School, Srinagar, J & K Board of School Education with an aggregate percentage of <b>84.4 (Distinction), 2001.</b>
<b>Past Teaching Experience</b>		<ol style="list-style-type: none"> <li>1. Guest lecturer in <b>Kashmir Govt. Polytechnic</b>, Gogji Bagh, Srinagar from 04/09 to 06/09.</li> <li>2. Contractual lecturer in the Department of Electronics and Communication Engineering, <b>NIT Srinagar</b> for three academic sessions at both B.Tech. and M.Tech. levels.</li> </ol>

### **Patents Published**

1. Haider Mehraj, **Farkhanda Ana**, Tanvir Ul Hassan Dar, Zahid Khaki, Syed Mujtiba Hussain: Apple Leaf Disease Detection using Deep Learning Algorithms. Patent published by Indian patent office, Patent Office Journal No. 52/202, Publication Date: 24/12/2021
2. **Farkhanda Ana**, Najeeb-ud-Din: Design and performance investigation of 0.7  $\mu\text{m}$  Pentacene based organic thin-film transistors. Patent published by Indian patent office, Publication date: 22/06/18, Application No. 201811011033 A (**Examination stage**)
3. Haider Mehraj, Faisal Rasheed, Idris Afzal, **Farkhanda Ana**, Azra Nazir: Biometric Fingerprint Recognition System with Encryption. Patent published, The Patent Office Journal No. 38/2019, Publication date: 20/09/2019, Application No. 201911035881 A

### **List of Publications (SCI/SCOPUS indexed)**

1. **Farkhanda Ana**, Najeeb-ud-Din: Device Performance Optimization of Organic Thin-Film Transistors at Short-Channel Lengths Using Vertical Channel Engineering Techniques, **Semiconductors, Springer**, Vol. 55, Issue 1, pp.116-121, 2021.
2. **Farkhanda Ana**, Haider Mehraj: Modeling of Gate Resistance and Its Importance in Switching Circuits: A Review, *IJRAR*, Vol. 6, issue 1, pp. 539-547, Feb.2019, ISSN 2348-1269
3. **Farkhanda Ana**, Najeeb-ud-Din: An analytical modeling approach to the electrical behavior of the bottom-contact organic thin-film transistors in presence of the trap states, *Journal of Computational Electronics*, Vol. 18, No. 2, 2019, pp. 543-552, Feb. 2019. ISSN: 1572-8137
4. **Farkhanda Ana**, Najeeb-ud-Din: Design and performance investigation of short channel bottom-contact organic thin-film transistors. *Journal of Computational Electronics*, vol. 17, No. 3, pp. 1315-1323, April 2018. ISSN: 1572-8137
5. **Farkhanda Ana**, Najeeb-ud-Din: Effect of Mobility Degradation on the Device Performance of Organic Thin-Film Transistor's, *IEEE Region 10 Annual International Conference, Proceedings/TENCON, IEEE Xplore*, 22nd-25th November, DOI [10.1109/TENCON.2016.7848654](https://doi.org/10.1109/TENCON.2016.7848654)

ISSN 2159-3450

6. **Farkhanda Ana**, Najeeb-ud-Din: Simulation study of the electrical behavior of bottom contact Organic Thin Film Transistor's, 2014 IEEE 2nd International Conference on Emerging Electronics: Materials to Devices, ICEE 2014 - Conference Proceedings, IEEE Xplore, DOI [10.1109/ICEmElec.2014.7151133](https://doi.org/10.1109/ICEmElec.2014.7151133). ISBN 978-1-4673-6528-4

### **Other Journal Publications**

1. Mohamad Idris Wani, Bareen Farooqi, Nida Wani, Haider Mehraj and **Farkhanda Ana**: Face Based Gender Classification using COSFIRE Filter, International Journal of Advance Engineering and Research Development (IJAERD), Special Issue on the proceedings of National Conference ETIECE-2017, Jan. 2018. ISSN 2348-4470.
2. Haider Mehraj, Md Hesam Akhter, **Farkhanda Ana**, Taseem Nazir, Arashid Ahmed, Junaid Farooq War: Human Gait Recognition: A review, International Journal of Advance Engineering and Research Development (IJAERD), Special Issue on the proceedings of National Conference ETIECE-2017, Jan. 2018. ISSN 2348-4470.
3. **Farkhanda Ana**, Najeeb-ud-Din: Suppression of gate induced drain leakage current (GIDL) by gate workfunction engineering: Analysis and Model. Journal of Electron Devices, vol. 13, 2012, pp. 984-996. ISSN 2412-1150
4. **Farkhanda Ana**, Najeeb-ud-Din: Gate Workfunction Engineering for deep sub-micron MOSFET's: Motivation, Features and Challenges. IJECT, vol. 2, issue 4, Oct-Dec 2011, pp. 29-35. ISSN 2230-7109.
5. **Farkhanda Ana**, Najeeb-ud-Din: Optimisation of metal gate workfunction engineering for deep sub-micron MOSFET's. IJECT, vol. 3, issue 4, Oct-Dec 2012. ISSN 2230-7109.

### **Invited Talks**

1. Invited talk on "Fostering Innovation among young minds" during Student Induction Program held in the School of Engineering and Technology, BGSBU on Sept. 28, 2021.
2. Invited talk on "Promoting Innovation in University Campus" during Student Induction Program held in the University Polytechnic on Sept. 23, 2021.
3. Invited talk on "Innovation & Entrepreneurship" during Guest Lecture Series Program organised by University Polytechnic, BGSB University on March 22, 2021.
4. Resource Person in One day technical Workshop cum Awareness Camp on "Innovation, Incubation and Training"-Shaping the Young Minds, jointly organized by Higher Education Dept., Govt. of J&K, Govt. PG Degree College, Rajouri and Gujarat Innovation Augmentation Network on Feb. 08, 2021.
5. Expert Talk on "Device Simulation using ATLAS" in STC on Hands on training on EDA tools organized by Dept. of ECE, NIT Srinagar, July 22-26, 2019
6. Expert Talk on "Organic Electronics: A Pathway to Sustainable Electronics" in STC on Emerging Electron Devices for Integrated Circuit Applications organized by Dept. of ECE, July 15-19, 2019.

### **Seminars/ Workshops/ Conferences/Training Programs**

1. Participated in the Indian Nanoelectronics Users' Programme - Idea to Innovation (INUP - i2i) Familiarization Workshop on Nanofabrication Technologies, held at IIT Bombay during January 19-21, 2022.
2. Participated in a 5-Days AICTE sponsored FDP on "Outcome based Education for the AICTE Approved Institutions of UTs of J&K and Ladakh" organized by the National Institute of Technology, Srinagar from March 22-26, 2021.
3. Participated in the five days online workshop on "Emerging CMOS Technologies and Beyond: Trends and Challenges" held at MNIT Jaipur during November 26-30, 2020.
4. Attended and successfully completed Two weeks Refresher Course in "Engineering, Physical Sciences and Management" organized by Bharati Vidyapeeth's Institute of Computer Applications and Management (BVICAM), New Delhi during 19<sup>th</sup>-31<sup>st</sup> October, 2020 and secured A<sup>+</sup>.
5. Participated in the IEEE Electron Devices Society DL Mini Colloquium (Virtual) on "Emerging Nano Devices and Circuits – The Roadmap Ahead" jointly organized by Department of Electronic Science, University of Delhi, South Campus and IEEE Electron Devices Society Delhi Chapter – India during October 05-09, 2020.
6. Participated in two week FDP on Robotics at IIT Delhi during March 01-14, 2020.
7. Attended three-week 83<sup>rd</sup> General Orientation Course from July 09, 2019 to July 30, 2019 and obtained Grade A.
8. Participated in five day workshop on Data Science and Information Security organized by Deptt. of CSE and ECE, IUST from 11<sup>th</sup>-15<sup>th</sup> June, 2019.
9. Participated in the one day workshop on Intellectual Property Rights organized by Innovation Cell, BGSB University, Rajouri on 25<sup>th</sup> January 2019.
10. Participated and presented a paper titled "A two-dimensional numerical simulation study of organic thin-film transistor's" in the International conference on Recent Advances in Interdisciplinary Sciences organized by department of Electronics, University of Jammu during January 11-12, 2019.
11. Participated in one day conference on Innovations in Cyberspace-CyInnov8 held at DRDO Bhawan, New Delhi on 29<sup>th</sup> October, 2018.
12. Participated in Short Term course on "Sustainable Creativity & Innovation Management in Institutions through ICT" conducted by Media Centre, BGSB University, 24-09-18 to 28-09-18.
13. Participated in Short Term course on "MATLAB and LABVIEW with its Hardware Interface through ICT" conducted by Deptt. of Electrical Engineering, BGSB University, 29-01-18 to 02-02-18.
14. Participated in International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT-2017) organized by ZHCET (Aligarh Muslim University), Aligarh held from 24-26 November 2017.
15. Participated and presented a paper on "Design and Performance Analysis of Organic Thin-Film Transistor's" in the National conference on Emerging Trends and Innovations in Electronics and

Communication Engineering (ETIECE-2017), 26th-27th August, organized by Deptt. of ECE, BGSBU

16. Participated and presented a paper on “Effect of Mobility Degradation on the Device Performance of Organic Thin-Film Transistor’s” in International Conference IEEE TENCON 2016, 22nd-25th November, Singapore (published in IEEE Xplore and TENCON proceedings indexed by SCOPUS).
17. Participated in TEQIP-III Sponsored one week workshop on “Machine Learning:Tools and Techniques” organized by Deptt. of Computer Science Engineering and Information Technology Engineering in collaboration with Aligarh muslim University from 31-10-18 to 04-11-18.
18. Attended Short term course on “Power Quality Monitoring and Analysis through ICT” conducted by Department of Electrical Engineering, BGSB University, 30-10-17 to 03-11-17.
19. Attended one week workshop on “Modeling and Simulation of Nano-Transistors” organized by Department of Electrical Engineering, IIT Kanpur, February 13-17, 2017.
20. Participated in Digital India week 2015 organized by National Institute of Technology, Srinagar.
21. Participated and presented a paper on “Simulation study of the electrical behavior of bottom contact Organic Thin Film Transistor’s” in 2<sup>nd</sup> IEEE International conference on Emerging Electronics on December 3-6, 2014 at IISC Bengaluru.
22. Participated and presented a paper on “Organic Electronics-A better tomorrow” in National Research Scholars’ Conclave (IRTST-16) on April 2-3, 2016 at National Institute of Technology, Srinagar.
23. Participated and presented a paper on “ICT and Education: An integral tool to development” in International seminar on ICT and value Education: Issues and Challenges on March 27<sup>th</sup> 2014 at Govt. College of Education, M.A. Road, Srinagar.
24. Participated and presented a paper on “Role of ICT in changing society-with special reference to the state of J & K” in IETE Diamond Jubilee seminar on September 13-14, 2013 at NIT Srinagar.
25. Participated and presented a paper on Impact of Gate Workfunction Engineering on the Device Performance in Deep-submicron Regime” in 8<sup>th</sup> JK Science Congress at University of Kashmir on 17<sup>th</sup> to 19<sup>th</sup> September 2012.
26. Participated and Presented a paper on “Silicon-on-Insulator: Future of CMOS” in 6<sup>th</sup> JK Science Congress at University of Kashmir on 2<sup>nd</sup>-5<sup>th</sup> December, 2010.
27. Attended one week workshop on “Design of RF circuits and Lab” at IIT Delhi from January 16-20, 2012.
28. Attended two day training programme on “Xylinx, Mentor and RTOS” in the department of Electronics and Communication, NIT Srinagar from April 4-5, 2012.

**Professional Training**

1. Training on TV transmission and up-link facility at PRASAR BHARATI, DOORDARSHAN KENDRA, Srinagar [one month].
2. Training on “MICROCONTROLLER & ITS INTERFACING” in Deptt. of Electronics and Communication, NITTTR, Chandigarh [two weeks].

**Conferences/ Programmes**

1. Organized one day workshop on “Intellectual Property Rights” on 25<sup>th</sup> January 2019 at BGSB University as Convener, Innovation Cell.

**organized**

2. Co-ordinated six week blended MOOC on “Soft-skills and workplace communication” organized by IIT Bombay from 22<sup>nd</sup> January 2018 to 10<sup>th</sup> March 2018.
3. Organizing Secretary of National Conference on Emerging trends and Innovations in Electronics and Communication Engineering (ETIECE-2017) held on 26-27 August 2017 organized by Department of Electronics and Communication Engineering, BGSB University
4. Organizing Secretary of National Research Scholars’ Conclave “Innovation and Recent Trends in Science and Technology (IRTST-16)”, April 2-3, 2016, National Institute of Technology, Srinagar.
5. Organizing member of IETE Diamond Jubilee seminar, September 13-14, 2013 NIT Srinagar.

**Additional Responsibilities**

1. Coordinator Start-up & Innovation cell, BGSB University
2. Faculty In-charge, Tinkering Lab, BGSBU
3. Faculty Convener, Institution Innovation Council (MHRD)
4. General Warden, Fatima Zehra Hall, BGSBU
5. Coordinator, Women Cell, SoET
6. Library Co-ordinator, SoET, BGSBU
7. Member of BGSB University Cultural and Literary committee
8. Departmental Co-ordinator MOOCs, BGSB University
9. Member, Interdisciplinary Board of Studies (IDBS), Design Innovation Centre, Central University of Kashmir.

**Membership**

1. Quarterly Franklin Membership awarded by London Journal Press (UK) (Membership ID#FO83012)
2. **Associate Member**, The Institution of Electronics and Telecommunication Engineers (IETE), India.
3. **Associate Member**, The Institution of Engineers (IEI), India.
4. **Life Member**, Environmental club “HOPE”, Srinagar.

**Additional Qualification**

Diploma in creative writing in English through Indira Gandhi National Open University.

**Co-Curricular Activities**

Active participation in extra-curricular activities.  
Program coordinator & comparer in various University events.

I do hereby declare that the particulars of information and facts stated herein above are true, correct and complete to the best of my knowledge and belief.

Place: Rajouri  
Date: 17.05.2022

**Farkhanda Ana**